

# OPPORTUNITIES FOR U.S. INDUSTRY IN CHINA

*Compiled by Trade Development*

## Business opportunities for U.S. firms abound in China.

However, there are many complexities of the market as well as numerous changes taking place as China adjusts to comply with WTO commitments. The industry sector reports that follow include environmental technologies, telecommunication and medical devices. Additional reports representing other industry sectors are available at [www.doc.gov/chinatradeimission/](http://www.doc.gov/chinatradeimission/)

### ENVIRONMENTAL TECHNOLOGIES

China reportedly spent just under \$17 billion (or 1.5 percent of GDP) on environmental protection in 2000, a 28 percent increase over 1999 and a near doubling of 1998 spending levels. In its 10th Five Year Plan (2001-2005), China plans to spend \$85 billion to meet environmental goals. Beijing will spend \$12 billion on environmental lean-up to host the 2008 Olympics.

Estimates of the major environmental market sub-sectors in China are: water and wastewater treatment (\$12 billion); air pollution control (\$9.64 billion); and solid and hazardous waste management (\$7.23 billion). Market demand is developing for innovations, cleaner production, and resource management techniques that simultaneously protect the environment and save or generate money, either through increased efficiency or by re-using and recycling by-products.

## IMPACT OF CHINA'S WTO ACCESSION

### *Tariff Reductions*

China began implementing tariff reductions on industrial products prior to WTO accession. China's accession to WTO is expected to help U.S. environmental exporters by significantly lowering tariffs and discouraging import substitution policies, but change is anticipated to be neither instantaneous nor dramatic for the equipment side of this sector. China's industrial tariffs will decline from a 1997 average of 25 percent to 8.9 percent. Nearly all of these reductions will be completed by January 2005. For a few products, reductions will continue until 2010.

### *Other Commitments*

Under the bilateral WTO agreement, foreign service suppliers may provide environmental consultation services through cross-border delivery, without having to establish a representative office in China. All other foreign service suppliers may operate in China through a joint venture. China's WTO environmental services commitments cover sewage, solid waste disposal, cleaning exhaust gases, noise abatement, nature and landscape protection, and other environmental services. However, environmental monitoring and pollution source inspection is excluded.

China agreed to significantly liberalize a broad range of services sectors, including professional services, by eliminating market access restrictions. China will eliminate for both Chinese

and foreign-invested enterprises any export performance, trade-balancing, foreign exchange balancing, and prior experience requirements (such as importing and exporting) as criteria to obtain or maintain the right to import and export.

Chinese enterprises have full trading rights, subject to certain minimum registered capital requirements. Joint ventures with minority foreign ownership will be granted full trading rights within one year, and joint ventures with majority foreign ownership will be granted full trading rights within two years after accession. All enterprises in China will be granted full trading rights within three years after accession (except for limited products reserved for trade by state enterprises as identified in Annex 2A to the Protocol.)

## REGULATORY ISSUES/ MARKET ACCESS

### *Certification Standards*

China's import licensing system can no longer function as a trade barrier and must comply with principles of national treatment and non-discrimination. Importation or investment approvals cannot be conditioned on whether competing domestic suppliers exist or on performance requirements of any kind, such as export performance, local content, technology transfer, offsets, foreign exchange balancing, or research and development. China agreed not to enforce the terms of any contract imposing these requirements. China will only impose, apply, or enforce regulations or other technology transfer measures

consistent with the Trade Related Investment Measures (TRIMS) and Trade-Related Aspects of Intellectual Property (TRIPs) agreements.

Currently, foreign companies cannot distribute products through wholesale and retail systems in China, or provide related distribution services, such as repair and maintenance services. This prohibition will be phased out over three years with certain exceptions.

#### *Other Regulatory Issues*

Environmental protection is one of China's only two national priority initiatives. Increased enforcement of current environmental standards by the government prompted many companies to invest in environmental technology or face closure, presenting huge opportunities for U.S. companies to increase market share. China and its foreign lenders still spend far more on the water sector than on air and solid waste, especially to clean up priority river basins and lakes. As a result of amendments to the Air Pollution Prevention and Control Law, governments at all levels must now include measures for atmospheric protection in all economic and social development plans. China is also starting to enforce its comprehensive solid and hazardous waste laws. A more comprehensive approach to environmental monitoring and protection is developing within the legislation itself.

The Ministry of Foreign Trade and Economic Cooperation (MOFTEC) is establishing a new agency specifically to clarify rules and regulations associated with WTO entry and foreign trade laws and regulations. MOFTEC is overhauling current regulations to bring them more in line with international standards, and mandated that measures formulated and implemented by local authorities must be consistent with national laws. WTO entry should catalyze transparency of laws and regulations as well as the development of a rules based system, thus ensuring some level of predictability and gradually improving the climate for foreign trade and investment.

China is developing legal bases to promote and support cleaner production, emissions trading, and market based incentives. There is a growing recognition for the need to legislate the comprehensive use of natural resources, and a definitive shift from concentration-related regulations and end-of-pipe pollution control to a more holistic, pollution prevention approach.

#### *Customs Issues*

Exports must be brokered through a reliable local representative or sold indirectly through multilateral projects, foreign funded investment schemes, or by targeting demands of foreign invested companies in China. The best option is to establish a joint venture or a wholly foreign owned enterprise (WFOE).

#### *Tax Issues*

To meet funding demands, water tariffs are set to rise, cities are levying wastewater surcharges, and BOT-type concession projects are emerging. The government made some funds available by raising current wastewater treatment surcharges levied on water bills by 30 percent. According to the Ministry of Construction, cities can now use part of their city's construction taxes to fund wastewater treatment plants.

#### *Intellectual Property Protection*

China is implementing the Agreement on Trade-Related Aspects of Intellectual Property (TRIPs) as a result of its accession to the World Trade Organization. According to the 1992 and 1995 bilateral intellectual property agreements and 1996-action plan,



Photo courtesy of © ImageChina

China has made steady progress to improve its intellectual property regime. However, large-scale unauthorized production and sale of copyrighted products and trademark counterfeiting remain widespread. Full implementation of the TRIPs Agreement will enhance China's development of intellectual property rights, particularly for the high tech industries.

#### ***Tendering Procedures***

Tied bilateral assistance is often a decisive factor to the Chinese when tendering and awarding contracts to foreign companies for environmental projects. This is especially true for smaller projects and consultant work including feasibility studies, project preparation, and environmental impact assessments. Larger projects financed by soft loans are often created specifically for one country's firms, leading to an over-specification of equipment, and creating unsustainable solutions to China's environmental problems. While most nations admit that tied aid programs ultimately spoil China's environmental market, such aid programs are inextricably linked to environmental business in China. Although some countries recently abandoned soft loans programs or are dramatically restructuring their programs to seek a more legitimate environmental emphasis, tied aid programs still have a tenacious hold on the market, and securing contracts can be difficult for firms without a governmental aid package.

#### ***Financing Issues***

Competition from foreign countries is fierce. Government-subsidized efforts by European, Japanese, Canadian, and Australian competitors tie large sums of multilateral-sourced funding by co-financing operations, and by offering low-interest "soft" loans and extended repayment terms. Foreign government representatives act as development consultants and provide local Chinese authorities with free technology demonstrations and demonstration projects in order to lay the groundwork for follow-on contracts.

There is discussion within government think tanks regarding the development of bond markets, publicly traded investment funds, and other financial tools to be focused on environmental sector investment. The effective use of these tools would greatly reduce the financial burden currently shouldered by government budgets. However, a more developed and better-regulated financial sector is required before such tools can be reasonably be expected to perform in this capacity.

### **MARKET OPPORTUNITIES**

#### ***Air Pollution Control***

China recently overhauled its clean air act and now mandates desulfurization systems on all new power plants and industrial facilities located in designated sulfur dioxide and acid rain control zones. China also launched an ambitious campaign to curb vehicle emissions in major cities by phasing out leaded gasoline, issuing new tailpipe standards, developing alternative fuel technologies, and investing in control and inspection equipment.

#### ***Wastewater Treatment***

China will spend the bulk of public environment and resource protection monies on water supply, water treatment, and water pollution problems. Currently, 50 percent of China's major cities and towns lack potable water, and as much as 90 percent of urban sewage discharges go untreated. About 25 percent of all Chinese lakes are affected by eutrophication. Almost all coastal seas are moderately to highly polluted. Little or no groundwater in the country remains unpolluted. Northern China is plagued by severe water shortages; southern China has flooding problems. U.S. market share in China's huge wastewater treatment market slipped to 10 percent in 1999 from 12 percent in 1997. Japan retains a commanding 30 percent, and European countries (mostly Germany and France) hold a 40 percent share.

#### ***Solid And Hazardous Waste Treatment***

China is slowly beginning to enforce its comprehensive solid and hazardous

waste law. Investment remains low, despite a dire need for hazardous waste treatment technologies. Low-cost resource recovery, monitoring equipment, integrated waste management, cleaner production techniques, and technology to improve existing landfills enjoy the best prospects.

Poor operations and maintenance heavily influences the efficiency of environmental protection expenditures and equipment. Potentially strong market demand awaits investors who form well-managed joint ventures (JVs) or wholly owned foreign owned enterprises (WFOEs) and can provide low maintenance or self-maintaining technologies, or illustrate to enterprises that relatively small expenditures on maintenance can result in long-term efficiencies and revenues.

### **OTHER INFORMATION**

It is not so much the regulatory pressures, but the economic efficiencies and the availability of assistance funding that currently create market opportunities for foreign vendors. Most exporters will likely find market demand through either offering efficiency solutions that save money or generate revenues, or by exploiting the opportunities generated by multilateral and untied bilateral assistance programs.

Additional market research on the environmental technology industry in China is available through <http://environment.ita.doc.gov/>

#### ***For More Information, contact:***

Susan Simon,  
International Trade Specialist  
Office of Environmental  
Technologies Industries  
Tel: (202) 482-0713  
Email: Susan\_Simon@ita.doc.gov

### **TELECOMMUNICATIONS**

China is one of the world's largest and fastest growing telecommunications markets. China's Ministry of



Information Industry (MII) reported in April 2001 that China's telecommunications network grew at an average rate of more than 30 percent over the past decade, and predicted that this growth rate will continue over the next five years. By the end of 2005, MII projects that China will have over 500 million telephone users and 200 million Internet users.

Mobile phones are one of the fastest growing sectors in China's telecommunications market. China surpassed the United States in 2001 as the country with the largest number of mobile phone subscribers in the world. By year-end 2001, MII reported that China had more than 147 million mobile subscribers.

In addition to its 147 million mobile subscribers, China had over 179 million wireline subscribers at year-end 2001, according to MII. China's investment in its telecommunications infrastructure in 2000 reached \$25.8 billion, an increase of 33 percent over 1999. A similar increase was expected in 2001, although final figures are not yet available.

U.S. exports of telecommunications equipment to China amounted to \$757 million in 2000. Most U.S. telecom equipment exports to China tend to be advanced technology products, such as networking equipment. U.S. exporters are generally not competitive in commodity products, such as telephones and answering machines.

## IMPACT OF CHINA'S WTO ACCESSION

### Tariff Reduction

Most telecommunications equipment is covered by the Information Technology Agreement, which China has signed on to in conjunction with its WTO accession. China has agreed to the elimination of tariffs on two-thirds of the products under the Information Technology Agreement by January 1, 2003, and the elimination of tariffs for all the remaining products by January 1, 2005.

### Other Commitments

- Open China's telecommunications services and Internet services markets to foreign investment.
- Reduce or eliminate a variety of non-tariff barriers, including technology transfer requirements, domestic content requirements and export performance requirements.

## REGULATORY ISSUES/MARKET ACCESS

**Certification Standards:** Telecommunications equipment is currently subject to redundant testing requirements by the Ministry of Information Industry and the Administration of Quality, Standards, Inspection and Quarantine (AQSIQ). The Chinese government has instructed these agencies to resolve this issue and AQSIQ claims that final details should be resolved by June 1, 2002.

## MARKET OPPORTUNITIES

**Telecommunications Services:** China will gradually open its telecommunications services markets to foreign investment. Telecommunications services are divided into three categories, value-added services, mobile, and basic wireline services. Each category has its own 3-phase schedule for market opening, beginning with the three cities of Beijing, Shanghai and Guangzhou, expanding to 14 additional cities in the second phase, and finally opening nationwide.

## OTHER INFORMATION

**Digital Olympics in 2008:** The 2008 Beijing Olympics also offers the following opportunities for U.S. telecom firms:

- Beijing will invest \$3.6 billion in information services.
- Expand its fiber optic networks to cover all Olympic sites.



Photo courtesy of © Imagechina



- Introduce a mobile communications network capable of handling 500,000 calls in the Olympic site area.
- Build a multi-language intelligent network so that there will be no "language barriers" during the Olympic games.
- Beijing will promote efforts to highlight "Digital Olympics" at the opening and closing ceremonies.
- The city plans to build an information security system to ensure the security of all Olympic Games-related networks and information, and provide information and technological support to the overall security during the Olympic games.

***For More Information contact:***

John Henry,  
International Trade Specialist  
Office of Telecommunications  
Technologies  
Tel: (202) 482-1193  
Email: John\_Henry@ita.doc.gov

## **MEDICAL DEVICES**

The Chinese market for medical equipment, currently ranked the eleventh largest medical device country market, is

estimated to be \$2.5 billion. About 50 percent of China's annual medical device demand is being met by imports. U.S. Department of Commerce (DOC) trade and tariff data show that U.S. exports of medical devices to China have been growing at double-digit rates, from \$124.5 million in 1998 to \$322.5 million in 2001. The potential for medical device exports in China is vast, and most experts agree that at some point, China will be the largest single country market for U.S. medical device exporters.

U.S. is the leading supplier of imported medical devices, accounting for one third of all medical device imports, and import sales are expected to increase 10-15 percent annually. The EU supplies an estimated 28 percent (Germany supplies 13 percent), while Japan supplies 25 percent of all medical device imports. Other countries have niche markets; Switzerland is the leading supplier of artificial joints, while Malaysia is the leading supplier of UV/IR apparatus and surgical gloves.

Most medical treatment is currently done in Ministry of Health operated hospitals, which for the most part have a high degree of operating autonomy. There are over 65,000 hospitals in China, with about 15,000 hospitals

at the county level or above. These county hospitals are the largest and best equipped, and are working at improving the quality of service. The country is developing a community based healthcare system in urban areas, designed to provide citizens with minor medical treatments at home and in local clinics, thereby shifting service away from the main hospitals. In addition to the public hospital system, there are approximately 350 Chinese Peoples Liberation Army (PLA) hospitals throughout China. In general, PLA hospitals have larger budgets to purchase medical equipment. There are very few private hospitals in China.

## **IMPACT OF CHINA'S WTO ACCESSION**

### ***Tariff Reduction***

China will reduce its tariffs on medical equipment from a current average of 4.9 percent to 3.9 percent by January 1, 2005. Over 90 percent of these reductions will be completed by January 1, 2003.

### ***Other Commitments***

If WTO members agree to and adopt the medical/scientific equipment sectoral initiative that originated in APEC, China will join this initiative and eliminate its tariffs on the covered medical/scientific equipment products. For additional information, see: [www.export.gov/china/chinagateway](http://www.export.gov/china/chinagateway)

## **REGULATORY ISSUES/ MARKET ACCESS**

China's regulatory device system is in an early stage of development, but is currently complex and not yet transparent. China's State Drug Administration (SDA) is the sole medical device regulatory agency. However, there are additional safety reviews required for some types of products. Based upon regulations, which became effective on April 1, 2000, all medical devices to be sold in China must be registered with the SDA.

### ***Certification Standards***

Local type testing is required for class



II and III medical devices before registration. Clinical tests are required to be included in registration applications for class II and III products. Local clinical trials are required for implantable products. The SDA has a window of 90 days to complete each regulatory review. The standard fee for a review is approximately \$363 per product.

#### *Other Regulatory Issues*

In addition to SDA approval, there are medical safety inspection requirements, which are considered redundant by the Department of Commerce and U.S. industry. For example, electro-medical products require a safety review by AQSIQ (Administration of Quality Supervision & Quarantine). These reviews are viewed as a WTO compliance issue since they are only required for imported products and the Department of Commerce is raising concerns with the Chinese government concerning these reviews with the goal of having them eliminated.

The importations of used medical devices are not allowed. However, once in China used medical equipment can be sold in the domestic market.

#### *Intellectual Property Issues*

Protection of intellectual property is not as serious a concern for most U.S. medical device exporters, as it is for pharmaceutical manufacturers. However, IPR is a concern for advanced technology medical device producers. In accordance with the WTO Agreement on Trade-Related Intellectual Property Rights (TRIPs), China is obligated to comply with internationally accepted norms for protecting and enforcing the intellectual property rights of U.S. and other foreign companies and individuals in China.

#### *Tender Procedures*

The tender system used by Chinese hospitals to purchase most medical devices is flawed — the bidding process takes too long and is not transparent. In addition, the tender process apparently has many instances of corruption. Hospitals used to do their own

procurement, but MOH has been working on standardization of bidding and tendering, which should be fairer to suppliers and more efficient for purchasers.

#### *Financing Issues*

Based upon feedback from U.S. companies operating in China, medical device reimbursements rates being used within MOH hospitals are set too low and do not reflect the value of advanced medical technology. Provincial health departments and price bureaus have a significant influence over prices, which are frequently low and favor Chinese produced medical devices. The larger urban hospitals have more money to purchase advanced medical equipment, based on their ability to generate more revenue from patient fees. MOH is trying to control what they view as an uneven distribution of resources by implementing purchasing controls.

#### *Market Access Issues*

One of the challenges is that China is divided into 31 provinces, so a U.S. company will most likely need more than one distribution channel to cover the entire country. Essentially China should be viewed as a collection of smaller markets, based around the larger cities, rather than as one large market. Each of these market regions has its own characteristics in terms of requirements, policies and administration. Therefore, individual contacts are important, as well as the knowledge of the system.

### **MARKET OPPORTUNITIES**

While China does have a large domestic product sector, most of the medical device manufacturers are small to medium-sized state owned companies that produce lower technology products. High tech medical products are primarily imported.

As more citizens have better jobs, they are able to pay for increase medical services, driving up the demand for new hospitals and clinics with higher technology equipment. As workers gain more control over their own

health care and as per capita GDP increases, it is anticipated that demand for medical devices will increase.

#### *Best Prospects:*

1. **X-ray apparatus:** Major areas of growth are X-ray equipment specifically for surgical use, as well as dental X-ray. In 2001, the U.S. shipped US \$102.9 million of X-ray apparatus to China, an increase of 55.1 percent over 2000.
2. **Medical and surgical instruments of all types:** In 2001, U.S. shipments were valued at \$59.5 million, up 35.3 percent over 2000. There have also been major increases in dental drills, syringes, and ophthalmic instruments.
3. **Electro-diagnostic equipment, including ultrasound, patient monitoring:** The U.S. shipped \$119.5 million of electro-medical equipment to China in 2001, up 25.8 percent over 2000.

### **OTHER INFORMATION**

The Department of Commerce, working closely with U.S. medical device industry representatives, is working closely with China health officials to improve China's regulatory environment and to reduce or eliminate redundant requirements. Commerce will lead a medical device trade mission to China September 15 – 24, 2002.

#### *For more information contact:*

Lisa Huot,  
International Trade Specialist  
Office of Microelectronics, Medical  
Equipment and Instrumentation  
Tel: (202) 482-2796  
Email: [Lisa\\_Huot@ita.doc.gov](mailto:Lisa_Huot@ita.doc.gov) ■